FLORIAN, E.; NEMESERI, L.

On mycotic skin diseases in Hungary the causative agent which is carried from animals to men. Acta veter Hung 12 no.2:185-193 '62.

1. Staatliches Institut fur Haut- und Geschlechtskrankheiten (Direktor: F.Foldvari) und Staatliches Institut fur Veterinarhygiene (Direktor: T.Kadar), Budapest.

*

FLORIAN, Endre, dr.

Effect of the blasts of nuclear structures on ionosphere. Radiotechnika 12 no.8:256-258 '62.

POPPER, E.; ROMAN, L.; CRACIUNEANU, R.; FLORIAN, E.

Studying the behavior of the cations of the 3d analytical group towards a class of organic reagents. Rev chimie Min petr 13 no.6:372-374 Je '62.

1. Laboratorul de chimie analitica Facultatea de Farmacie Institutul medico-farmaceutic, Cluj.

FLORIAN, Endre, dr.

Geophysical effects of nuclear blasts. Elet tud 17 no.26: 803-807 1 Jl '62.

FLORIAN, Endre, dr.

New data on G-layer. Elet tud 18 no.11:347 17 Mr '63.

FLORIAN, Endre, dr.

Radio and thunderstorms. Elet tud 18 no.43:1346 27 O '63.

FLORIAN, Endre

Effect of the February 15, 1961 solar eclipse on the ionosphere. Orsz meteor int besz tud kut 26:50-62 '62(publ.'63).

FLORIAN, Endre, dr.

The infinite empire of long waves. Pt. 2. Elet tud 19 no.40: 1892-1894 2 O '64.

GROZEA, Gh., corespondent; FERARU, Ion, corespondent; BARBAT, Ioan, corespondent; FLORIAN, H., corespondent; IONESCU, Flavia, ing. corespondent; LAZANU, Gheorghe, corespondent

The workers received their new tasks with enthusiasm. Constr Buc 17 no.782:1 5 Ja '65.

RUMANIA

616.981.71

FLORIAN, I., of Hospital No 1 (Spitalul Nr 1) of the MTTc [Ministerul Transporturilor si Telecomunicatiilor; Ministry of Transports and Telecommunications], Bucharest.

"Vasculopathic Incidents in Patients with Positive Seroreactions for Rickettsia and Pararickettsia."

Bucharest, Studii si Cercetari de Inframicrobiologie, Vol 17, No 6, 66, pp 457-463.

Abstract: Various forms of rickettsial and pararickettsial vasculopathies were observed in the internal diseases section of Bucharest's Railways Hospital No 1. Twelve case studies of various types are presented, with the pertinent clinical and laboratory data, and the favorable effect of intensive treatment with tetracycline is stressed.

Includes 9 references, of which one Russian and 8 French-language.

ROMANIA

VLAD, Gh., Capt, Dr, FLORIAN, I., Maj, Dr, and ALBU, St., Capt, Dr [affiliation not given]

"Observations on a Familial Epidemic of Trichinosis."

Bucharest, Revista Sanitara Militara, Vol 59, No 3, May-Jun 63, pp 501-507.

Abstract: A brief general description of trichinosis and a review of the literature followed by the case history of a familial epidemic affecting 5 persons in the commune of Avrig in Sibiu Raion. The clinical picture, results of laboratory analyses, complications and response to treatment are presented.

Includes 3 clinical tables and 11 references, of which 1 Russian and 10 Rumanian.

1/1

NICOLAU, St. S.; SURDAN, C.; SARATEANU, D.; ATHANASIU, Pierrette; SORODOC, G.; POPESCU-DANESCU, Georgeta; BABES, V.; STEFANESCU, I.; ILIESCU, C.; RADESCU, R.; MALITCHI, E.; CADERE, T.; FLORIAN, I.; PARASCHIVESCU, N.; SETLACEK, D.; DUMITRESCU, St.; SILVIU DAN, S.

A study concerning the rickettsial or pararickettsial etiology of some cardiovascular diseases. Rev. sci. med. 8 no.3/4: 151-158 '63.

1. Member of the Academy of the R.P.R. (for Nicolau).
(RICKETTSIAL DISEASES) (ANTIBODIES)
(CARDIOVASCULAR DISEASES) (ENDOCARDITIS)
(PERICARDITIS) (HEART BLOCK) (CORONARY DISEASE)
(THROMBOPHLEBITIS)

L 41118-66 EWP(t)/ETI/EWP(k) JD

ACC NR: AP6030205 SOURCE CODE: RU/0017/65/000/007/0372/0373

32
B

AUTHOR: Oprea, O. (Doctor); Florian, I. (Engineer); Lapusan, A. (Physician); Giusca, R.

ORG: [Oprea; Florian; Lapusan] "Tractorul" Works, Brasov (Uzinele "Tractorul"); [Giusca] Geological Committee, Bucharest (Comitetul Geologic)

TITLE: Method of determining the dimensions of silicogenous powders

SOURCE: Metalurgia, no. 7, 1965, 372-373

TOPIC TAGS: metal casting, silicon

ABSTRACT: A description of the method used at the Tractorul Works to determine the dimensions of the silicogenous powder in the molding sand. The determination is based on the suction of a large volume of air and on suspension filtration by means of a device consisting of a series of crucibles with filtering plates. Orig. art. has: 2 figures. [Based on authors' Eng. abst.] [JPRS]

SUB CODE: 13 / SUBM DATE: none / ORIG REF: 002

Card 1/1 11b UDC: 621.742.47

FLORIAN, J.

"Some shortcomings in the work of industrial management sections" p. 286 (Chemik, Vol. 6, No. 10, Oct. 1953, Katowice)

SO: Monthly List of East European Accessions, Vol. 3, No. 3 Library of Congress, March 1954, Uncl.

FIORIAN, J.

Changes in regulations concerning workers' invertions. p. 81.
ACTA PHYSICA POLONICA Warszawa Vol. 9, No. 3, Mar. 1956.

East European Accessions List (EEAL) Library of Congress
Vol. 5, No. 11, August 1956.

Florian, J.

Florian, J. Technological construction; perfect construction. p. 24.

Vol. 7, no. 1, Jan. 1957
STROJIRENSTVI
TECHNOLOGY
Czechoslovakia

So: East European Accessions, Vol. 6, May 1957
No. 5

FLORIAN, J.; ROMANIAK, R.

Inventive spirit in Poland. P. 155.

CHEMIK. (Ministerstwo Przemyslu Chemicznego i Stowarzyszenie Naukowe- Techniczne Inzynierow i Techników Przemyslu Chemicznego) Warszawa. Poland. Vol. 12, no. 4, April 1959.

Monthly List of East European Accessions (EEAI) LC. Vol. 8, no. 8, August 1959.

Uncl.

FLORIAN, J. ; SOKOL, J.

Experiences abroad with conveyor-belt transportation in open-pit mines. p. 352.

UHLE. (Ministerstvo paliv) Praha, Czecholsovakia, Vol. 1, no. 10, Oct. 1959.

Monthly List of East European Accession (EEAI), LC Vol. 9, no. 2, Feb. 1960.

Uncl.

FLORIAN, Ladislav

Experiences in the socialist work brigade movement. Cs spoje 9 no.4: 30-31 Ag '64.

1. Regional Administration of Telecommunications, Brno.

FLORIAN, M.

Knee surgery. Lek. listy 5 no. 17:507-509 1 Sept. 1950.
(CLML 20:1)

1. Of the Orthopedical Clinic, Masaryk University in Brno
(Head--Prof. B. Frejka, M. D.)

FLORIAN, M.; KRATOCHVILA, J.

Prevention of faulty posture in special physical training classes in schools. Acta chir. orthop. trauma. Cech. 29 no.1:25 F '62.

1. Ortopedicke oddeleni OUNZ v Trebici, prednosta MUDr. M. Florian.

(POSTURE in inf & child)
(PHYSICAL EDUCATION AND TRAINING)

FLORIAN, M.; VACHAL, K.

Damage to the ulnar nerve by a freely movable body in the sulcus nervi ulnaris. Acta chir orthop traun cech 30 no. 1: 54-57 F '63.

1. Ortopedicke oddeleni OUNZ v Trebici, vedouci MUDr. M. Florian.

(ULNAR NERVE)

FLORIAN, M. Dr.

FLORIAN, M.Dr.; KRATOCHVILA, J., prof.

Dorsolumbar kyphosis - outline of practical exercises. Acta chir. orthop. traum. cech. 22 no.1-2:13-17 Feb 55.

1. Z orthoped. odd. OUNZ, Trebic, predn: primar dr. M.Florian.
(KYPHOSIS
dorsolumbar, exercise ther.)
(EXERCISE THERAPY, in various diseases
kyphosis, dorsolumbar)

FLORIAN, Mircea, ing.

Socialist competition on the technical services, too. Munca sindic [7] no.1:11-14 Ja '63.

1. Vicepresedinte al comitetului sindicatului uzinele "Independenta", Sibiu.

FLORIAN, Petru, prof. (Dej); MARUSTERU, St., (Baia Mare); HERLING, C., student; PIRSAN, L.C., student (Bucuresti); IONESCU-TIU, C.; COSTACHESCU, C.V.; LAMBA, Stelian (Constanta); LIVIU, Petre (Pucioasa); STRATESCU, Ion, student; BRINZANESCU, V., elev (Constanta); KLIM, Bratu, student (Bucuresti); TEMPEANU, C. (Hunedorara); CALINESCU, Aurelian (Brasov); MUNTEANU, Valentin (Cluj); OPREA, Miron (Ploiesti); MIHAILEANU, N.; TIGANOIU, Al., inginer; Buicliu, Gh.; POPA, Eugen I. (Iasi)

Proposed problems. Gaz mat B 14 no.8:481-485 Ag '63.

1. Institutul Politehnic Bucuresti (for Herling).

FLORIAN, P., prof. inv. mediu (Dej)

Photograph circle of students in a Rumanian school. Gaz mat fiz 15 no.2: 80-85 F '63.

FLORIAN, T.

African syndical movement in full development. Munca sindic 6 no.4:50-53 Ap '62.

FLORIAN, Tibor, dr.

Geophysical effects of nuclear blasts. II. Elet tud 17 no.27:840-843 8 Jl '62.

FLORIAN, V., conf.ing.

Optimum profile of the bits with blades. Petrol si gaze 12 no.7: 300-305 Jl '61.

Florin, V.A.

PHASE I BOOK EXPLOITATION SOV/6201

Vsesoyuznyy s"yezd po teoreticheskoy i prikladnoy mekhanike. 1st, Moscow, 1960.

Trudy Vsesoyuznogo s"yezda po teoreticheskoy i prikladnoy mekhanike, 27 yanvarya -- 3 fevralya 1960 g. Obzornyye doklady (Transactions of the All-Union Congress on Theoretical and Applied Mechanics, 27 January to 3 February 1960. Summary Reports). Moscow, Izd-vo AN SSSR, 1962. 467 p. 3000 copies printed.

Sponsoring Agency: Akademiya nauk SSSR. Natsional'nyy komitet SSSR po teoreticheskoy i prikladnoy mekhanike.

Editorial Board: L. I. Sedov, Chairman; V. V. Sokolovskiy, Deputy Chairman; G. S. Shapiro, Scientific Secretary; G. Yu. Dzhanelidze, S. V. Kalinin, L. G. Loytsyanskiy, A. I. Lur'ye, G. K. Mikhaylov, G. I. Petrov, and V. V. Rumyantsev; Resp. Ed.: L. I. Sedov; Ed. of Publishing House: A. G. Chakhirev; Tech. Ed.: R. A. Zamarayeva.

Card 1/6

PURPOSE: This book is intended for scientific and engineering personnel who are interested in recent work in theoretical and applied mechanics.

COVERAGE: The articles included in these transactions are arranged by general subject matter under the following heads: general and applied mechanics (5 papers), fluid mechanics (10 papers), and the mechanics of rigid bodies (8 papers). Besides the organizational personnel of the congress, no personalities are mentioned. Six of the papers in the present collection have no references; the remaining 17 contain approximately 1400 references in Russian, Ukrainian, English, German, Czechoslovak, Rumanian, French, Italian, and Dutch.

TABLE OF CONTENTS:

SECTION I. GENERAL AND APPLIED MECHANICS

AVAILABLE: Library of Congress

SUBJECT: Physics

IS/dmp/mas
2-13-62

Card 6/6

FLORIAN, V., conf. ing.; BANCIU, I., lector ing.

Improving the mechanical drilling speed by tangential washing of roller bits. Petrol si gaze 12 no.8:348-352 Ag '61.

FLORIAN, V., conf. ing.; BANCIU, I., lector ing.

Improving the mechanical drilling speed by tangential washing of roller bits. Petrol si gaze 12 no.8:348-353 Ag '62.

FLORIAN, Yendre [Florian, A.]

"Defense shield" of the earth. Nauka i zhyttia 12 no.11:55-57 N '62. (MIRA 16:1)
(Atmosphere)

FLORIAN, Z., ing.

More than 4000 pictures of the moon. St si Teh Buc 16 no.9: 19 S '64

CA

7

Polarographic determination of adsorbability of charcoal with methylene blue. Z. A. Iofa and G. M. Florianovich (Moscow State Univ.). *Zavodskaya Lab.* 16, 1121-4 (1950).—Agitate 0.2 g. of dried sample for 10 min. with 0.5% methylene blue soln. Treat a 10-ml. aliquot with 0.2 ml. N H_2SO_4 and make a polarogram in an open vessel against a calibration curve. Charcoal high in ash should be washed with 6 N HCl, followed by H_2O. G. M. K.

Florianovich, G. M.

USSR.

The mechanism of the reduction of oxalic acid on a mercury electrode. G. M. Florianovich and A. N. Frumkin. *Doklady Akad. Nauk S.S.S.R.* 79, 997-1000(1951).—The relation of the potential φ at const. c.d., i, to the concn. of undissocd. $H_2C_2O_4$ and to the pH of the soln. was detd. The curves $\varphi - \log i$ had a slope = 120 mv. at pH <1.5 and 90–100 mv. at a pH 1.5–4. From the data, the conclusion was drawn that the first step, which detd. the rate of reduction, consisted in the union of an electron with a $H_2C_2O_4$ mol. The H of the acid mol. did not enter into this reaction.
J. Rovtar Leach

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(1)

FLORIANOVICH, G.M.

THE ELECTROREDUCTION OF ANIONS. A. N. Frumkin and G. M. Florianovich. Translated by Vera F. Brunwe from Doklady Akad. Nauk S.S.S.R. 80, 907-10(1951). 6p. (AEC-tr-1984)

Results are presented from a study of the electroreduction of the anions $S_2O_8^{=}$, $Fe(CN)_6^{-4}$, $PtCl_6^{=}$, $PtCl_4^{=}$, $IrCl_6^{=}$, $RhCl_6^{=}$, and MnO_4^{-} on a mercury cathode. Results and theories governing the electroreduction of anions are discussed. (C.H.)

FLORIANOVICH, G. M.

Defended his candidates dissertation in the Chemistry Faculty of Moscow State University on 11 February 1952.

Dissertation: "Electroreduction of Anions on a Mercury Cathode."

SO: Vestnik Moskovskogo Universiteta, Seriya Fiziko-Matematicheskikh i Yestestvennykh Nauk, No. 1, Moscow, Feb 1953, pp 151-157: transl. in W-29782, 12 April 54, [redacted].

FLORIANOVICH, G. M

USSR/ Chemistry - Physical chemistry

Card 1/2 Pub. 147 - 11/21

Authors : Florianovich, G. M., and Frumkin, A. N.

Title : Electro-reduction of anions over a mercury electrode

Periodical : Zhur. fiz. khim. 29/10, 1827-1846, Oct 1955

Abstract : The reduction of numerous anions was investigated on a mercury drop and amalgamated rotating cathodes. It was found that anions begin reducing at sufficiently negative values of the potential when the electrode surface is charged negatively (relatively difficult reducible anions) and that the anion reduction begins at such potentials at which the electrode surface is positively charged (easily reducible anions). The effect of foreign cations

Institution : Moscow State University im. M. V. Lomonosov

Submitted : February 15, 1955

Card 2/2 Pub. 147 - 11/21

Periodical : Zhur. fiz. khim. 29/10, 1827-1846, Oct 1955

Abstract : on the anion reducing process was investigated and it was established that the cations affect the magnitudes of minimum currents and increase same. The effectiveness of the cations depends upon their charge and concentration. Thirty-four references: 7 Czech., 6 USA, 18 USSR, 1 Fr. and 2 Eng. (1932-1954). Table; graphs; drawing.

FLORIANOVICH, G.M.

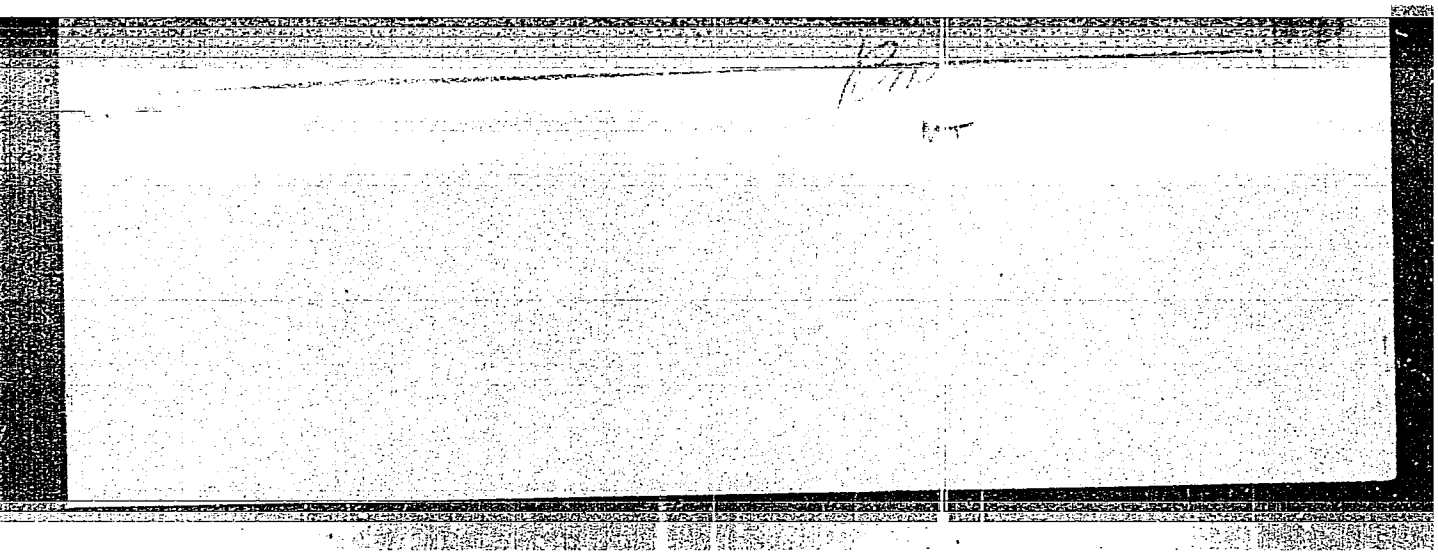
KHOMCHENKO, Gavriil Platonovich; VOVCHENKO, G.D., prof., red.; FLORIANOVICH,G.M., red.; GEORGIYEVA, G.I., tekhn.red.

[Manual of laboratory experiments in general chemistry] Laboratornyi praktikum po obshchei khimii. [Moskva] Izd-vo Mosk.univ., 1957. 181 p. (MIRA 10:12)

(Chemistry--Laboratory manual)

Florianovich, G.M.

APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000413330004-3"



APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000413330004-3"

FLORIANOVICH, G. M.

"Wirkung der Legierungsstoffe des Stahles auf die Passivie-rung in Sauren Losungen."

paper submitted for the Congress on Corrosion, Budapest, 24-30 Sept 1958.

Karpow Physikalisch-Chemische Anstalt, Moscow.

KOLOTYRKIN, Ya.M., prof.; FLORIANOVICH, G.M., kand.khim.nauk

Passivation of metals. Khim. nauka i prom. 3 no.4:483-491 '58.
(MIRA 11:10)

(Electrolytic corrosion) (Passivity (Chemistry))

AUTHORS: Florianovich, G. M., Kolotyrkin, Ya. M., Smirnova, N. K. SOV/2o-12o-4-43/67

TITLE: The Influence of Nickel Upon the Electrochemical and Corrosion Behavior of Steel (Vliyaniye nikelya na elektrokhimicheskoye i korrozionnoye povedeniye stali)

PERIODICAL: Doklady Akademii nauk SSSR, 1958, Vol. 12o, Nr 4, pp. 845 - 848 (USSR)

ABSTRACT: In this paper the influence exercised by nickel on the behavior of steel in the domain of passivation is investigated by means of the potentiostatic method of measuring polarization curves; the experiments were carried out with steels of the types Kh22T, Kh 22N14T and Kh 2CN6ST. Measurements were carried out at 20° in a 0,1 n-solution of H_2SO_4 in a nitrogen atmosphere.

The velocity of the dissolution of steel Kh 22T depends on the potential in rather a complicated way. The behavior of steel at different potentials is described in short. The minimum velocity of steel dissolution is within the potential range of from 0 to 0,500 V. Also the other types of steel investigated showed similar dependence of dissolution velocity on the

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potential. The addition of nickel decreases the dissolution velocity in all potentials that are more negative than + 1,200 V. The velocity of dissolution systematically decreases within the range of passivation in the case of an increase of the nickel percentage in steel. The addition of nickel has almost no influence upon the position of the curve which characterizes the over voltage of hydrogen. To convert steel into the passive state and thus also to increase its resistance to corrosion the stationary potential in the case of absent external polarization must be shifted towards the positive side, up to values which are more passive than the passivation potential. Such a shift can be brought about by the increase of the over voltage of the anodic reaction and also by increase of the total velocity of the depolarizing cathodic reactions. The authors decreased the over voltage of hydrogen by facing a small quantity of platinum upon the steel surface. Similar results were obtained by introducing atmospheric oxygen into the solution. The degree of passivation of the surface of a steel with given composition is a function of the potential and in the cases described does not depend on the method of maintaining this potential. A shift

The Influence of Nickel Upon the Electrochemical and Corrosion Behavior of Steel SOV/2o-12o-4-43/67

of the potential by a change in the chemical composition of the steel can considerably change the degree of its passivation with a given potential. In conclusion, the authors thank A.A.Babakov for having placed the steel samples at their disposal. There are 1 figure, 1 table, and 4 references, 3 of which are Soviet.

PRESENTED: January 10, 1958, by A.N.Frumkin, Member, Academy of Sciences, USSR

SUBMITTED: October 9, 1957

1. Steel--Corrosion 2. Steel--Electrochemistry 3. Steel--Passivity 4. Nickel--Electrochemistry

Card 3/3

FRUMKIN, A.N., akademik, otv.red.; YESIN, O.A., prof., red.; ZHDANOV, S.I., red.; KABANOV, B.N., prof., red.; KOLOTYRKIN, Ya.M., dokt.khim. nauk, red.; LOSEV, V.V., red.; LUKOVTSEV, P.D., prof., red.; SOLOV'YEVA, Z.A., red.; STENDER, V.V., prof., red.; FLORIANOVICH, G.M., red.; YEGOROV, N.G., red.izd-va; PRUSAKOVA, T.A., tekhn.red.

[Proceedings of the 4th Conference on Electrochemistry, October 1-6, 1956] Trudy 4-go soveshchaniia po elektrokhimii, 1-6 oktiabria 1956 g. Moskva, Izd-vo Akad.nauk SSSR, 1959. 867 p. (MIRA 12:5)

1. Soveshchaniye po elektrokhimii, 4th, Moscow, 1956.
(Electrochemistry)

FLORIANOVICH, G. M.

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PHASE I BOOK EXPLOITATION SOV/5256

Gerasimov, Valentin Vladimirovich, ed., Candidate of Chemical Sciences.

Korroziya reaktornykh materialov; sbornik statey (Corrosion of Nuclear-Reactor Materials; a Collection of Articles) Moscow, Atomizdat, 1960. 284 p. 3,700 copies printed.

Ed.: A.I. Zavodchikova; Tech. Ed.: Ye.I. Mazel'.

PURPOSE: This collection of articles is intended for mechanical and metallurgical engineers as well as for scientific research workers concerned with the construction of nuclear reactors.

COVERAGE: The water corrosion of various types of stainless steel and alloys under high pressures and temperatures is investigated from the point of view of the use of these materials for the construction of nuclear reactors. Attention is given to the following: the use of oxygen for protecting steel against corrosion, the behavior of steel in high-temperature

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Corrosion of Nuclear- (Cont.) SOV/5256

water with various compositions, factors of metal stress corrosion, intergranular corrosion, the mechanism of corrosion cracking, and the corrosion resistance of aluminum and zirconium alloys. Conclusions based on test results are included. No personalities are mentioned. Most of the articles are accompanied by references. Of 238 references 97 are Soviet.

TABLE OF CONTENTS:

Card 2/9

FLORIANOVICH, G. M., KOLOTYRKIN, Ya. M., BUNE, N. Ye., Moskva:

"The Mechanism Action Of Oxydizing Agents As Corrosion Inhibitors Of Nickel And Stainless Steel".

report submitted for the European Symposium on Corrosion Inhibitors, Ferrara Italy, 29 Sep-1 Oct 1960.

FLORIANOVICH, G.M.

Mechanism of the cathodic reduction of oxalic on mercury.
Zhur.fiz.khim. 34 no.1:216-218 Ja '60.
(MIRA 13:5)
(Oxalic acid) (Reduction, Electrolytic)

67946

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S/020/60/130/03/028/065
B004/B011

AUTHORS: Florianovich, G. M., Kolotyrkin, Ya.M.

TITLE: Influence of the Chromium Content on the Electrochemical and Corrosive Behavior of Iron-Chromium Alloys

PERIODICAL: Doklady Akademii nauk SSSR, 1960, Vol 130, Nr 3, pp 585-588 (USSR)

ABSTRACT: The investigations conducted in the authors' laboratory (Ref 6) showed that the potentiostatic method allows an objective evaluation of the electrochemical and corrosive behavior of metal alloys. This allows the evaluation of the anticorrosive behavior at different potentials and different (active, passive) surface states. In the present paper the authors used the above method to investigate the behavior of Fe-Cr alloys in 0.1 N H_2SO_4 in nitrogen atmosphere. The desired potential was kept constant by means of an electronic potentiostat. The concentration of the corrosion products was determined colorimetrically, in some cases also gravimetrically. The authors investigated pure Armco- and Hilger iron, alloys prepared from Armco-Fe with pure Cr (0.1-35% Cr) and alloys

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Influence of the Chromium Content on the Electrochemical and Corrosive Behavior of Iron - Chromium Alloys

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of the types 12Kh18, 1Kh13, Kh17, Kh28, containing up to 0.4% Ni in addition to Cr. The results are graphically given in figures 1,2. The curves reveal several sections depending on the potential: active dissolution, first limiting current, passivation, overpassivation, second limiting current, new activation. The authors found the following: the dissolution rate of pure passive Fe is lower by only one order of magnitude than its dissolution rate with limiting current. Alloys with up to 4% Cr are not passivated. Alloys with 4 - 13% Cr exhibit no passivation and no second limiting current. In alloys with more than 13% Cr there occurs no first limiting current. Their dissolution rate in the passive state is lower by three orders of magnitude than that of alloys with less than 13% Cr. In the potential section of the second limiting current and of the active dissolution, however, there occurs a rapid dissolution in the case of a Cr content rising above 13% (Table 1). These results do not agree with the data contained in references 7,8, but are confirmed by data offered by A. M. Sukhotin and E. I.

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Influence of the Chromium Content on the Electrochemical and Corrosive Behavior of Iron - Chromium Alloys

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Antonovskaya (Ref 10) and M. Pražek (Ref 11). It follows that the composition of an alloy is by no means a clear sign of its corrosive behavior, but the dissolution rate is a factor of the potential. The authors thank L. A. Vanyukova and A. A. Babakov for the alloys supplied and for their advice. There are 2 figures, 1 table, and 11 references, 4 of which are Soviet.

ASSOCIATION: Nauchno-issledovatel'skiy fiziko-khimicheskiy institut im. L. Ya. Karpova (Scientific Research Institute of Physical Chemistry imeni L. Ya. Karpov)

PRESENTED: October 1, 1959 by A. N. Frumkin, Academician

SUBMITTED: September 24, 1959

Card 3/3

L 13701-63 EWP(q)/EWT(m)/BDS AFFTC/ASD JD

ACCESSION NR: AP3003520 S/0020/63/151/001/0144/0147 55 54

AUTHORS: Florianovich, G. M.; Koloty*rkin, Ya. M. 19

TITLE: Passive characteristics of alloys on an iron base

SOURCE: AN SSSR. Doklady*, v. 151, no. 1, 1963, 144-147

TOPIC TAGS: galvanostatic method, potentiostatic method, Fe, Cr, critical current

ABSTRACT: Galvanostatic and potentiostatic methods were employed to study the influence of chrome content on the critical current (i_{cr}) and potential (φ_p) in an Fe-Cr alloy. An increase in chrome in the alloy causes φ_p to tend towards negative values. When the chrome content is over 20%, φ_p is constant. A rise in chrome content to 20-27% is followed by a marked decrease in i_{cr}. However, a further rise in chrome content causes i_{cr} to increase appreciably. The paper was presented by Academician A. N. Frumkin on 12 March 1963. Orig. art. has: 4 figures.

ASSOCIATION: Physicochemical Inst.

Card 1/2

S/020/63/148/005/020/029
B190/B102

AUTHORS: Kolotyrkin, Ya. M., Golovina, G. V., Florianovich, G. M.

TITLE: Depassivating action of halide ions on alloys based on iron

PERIODICAL: Akademiya nauk SSSR. Doklady, v. 148, no. 5, 1963, 1106-1109

TEXT: In order to obtain reliable data on the pitting effect arising on Fe-Cr and Fe-Cr-Ni alloys in electrolyte solutions to which halide ions were added, all factors were investigated that affect the transition ability of these alloys from a passive into an active state due to the presence of halide ions. This ability is characterized by the activation potential φ_a measured from either the anodic polarization curves or the variation of potential with time for constant anodic current. In the latter case φ_a depends on the current density according to the Tafel law. φ_a was also measured in dependence on the pH at constant halide ion concentration and on the latter at constant pH, and finally on the Cr

Depassivating action of halide ions ...

and Ni contents in the alloy. These measurements were made mainly the steel of type 1X13 (1Kh13) in sulfuric acid solutions. When φ_a is plotted versus $C_{SO_4^{2-}}/C_{Hal^-}$ with constant $C_{Hal^-} = 0.01$, it may be seen that φ_a increases exponentially with increasing SO_4^{2-} concentration for both Cl^- and Br^- ions. The remaining results are to be seen from the figures. There are 4 figures.

ASSOCIATION: Fiziko-khimicheskiy institut im. L.Ya. Karpova (Physico-chemical Institute imeni L.Ya. Karpov)

PRESENTED: October 16, 1962, by V.A. Kargin, Academician

SUBMITTED: October 12, 1962

Depassivating action of halide ions ...

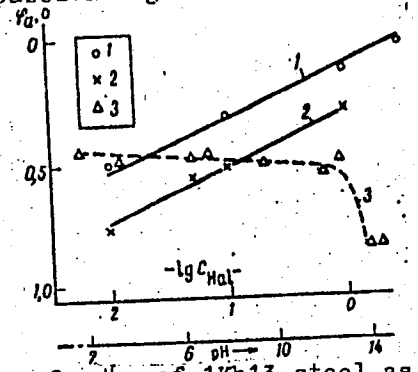

Fig. 2. φ_a of 1Kh13 steel as a function of the Cl^- (1) and the Br^- (2) concentrations at pH=2 and of the pH in a 0.1 N bromide solution (3).

S/020/63/148/005/020/029
B190/B102

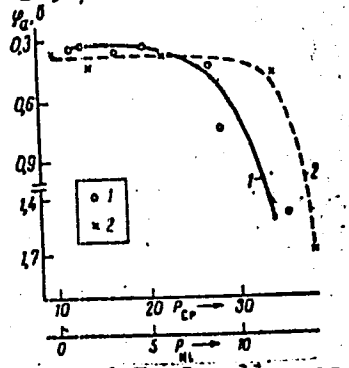

Fig. 4. φ_a of Fe-Cr alloy as a function of the chromium concentration (1) and of the nickel added to the alloy Kh22T (Kh22T) (2) in 0.1 N chloride solution of pH 2.

Card 3/3

FLORIANOVICH, G.M.; KOLOTYRKIN, Ya.M.

Passivation characteristics of iron-base alloys. Dokl. AN SSSR 151 no.1:144-147 Jl '63. (MIRA 16:9)

1. Fiziko-khimicheskiy institut im. L.Ya.Karpova. Predstavleno akademikom A.N.Frumkinym.
(Iron alloys) (Passivation)

FLORIANOVICH, G.M.; KOLOTYRKIN, Ya.M.

Mechanism of dissolution of iron alloys with in chromium sulfuric acid. Dokl. AN SSSR 157 no. 2:422-425 Jl '64. (MIRA 17:7)

1. Fiziko-khimicheskiy institut imeni Karpova. Predstavleno akademikom A.N.Frumkinym.

L 12973-65 EWT(m)/EWA(d)/EWP(t)/EWP(b) JD/JG/WB

ACCESSION NR: AP4042213 S/0020/64/157/002/0422/0425

AUTHOR: Florianovich, G. M.; Koloty*rkin, Ya. M.

TITLE: On the mechanism of dissolution of iron-chromium alloys in sulfuric acid.

SOURCE: AN SSSR. Doklady*, v. 157, no. 2, 1964, 422-425

TOPIC TAGS: iron chromium alloy, metal corrosion, passivation, corrosion mechanism, polarization

ABSTRACT: Until recently it was considered that direct one step interaction of surface atoms of the metal with the components of the aggressive medium (chemical mechanism), which plays an important role during interaction of metals with gases and organic substances is practically inoperative during interaction with aqueous solutions of electrolytes. The results of recent investigations of the latter situation, however, resulted in reconsideration of this viewpoint. In the investigations of the regularities of dissolution of iron-chromium alloys in acid solutions of electrolytes at elevated temperature phenomena were discovered which in [illegible] explained require the assumption of the chemical mechanism of dissolution. [illegible] insufficient experimental [illegible] definite

Card 1/3

conclusions regarding the nature of particles which interact with metal atoms during dissolution by chemical mechanism. Such particles may be water molecules and the process will proceed by the equation:

$$Me + n\ H_2O \longrightarrow Me(OH)_n + n/2H_2 \text{ (slow stage)}$$

with subsequent dissolution of $Me(OH)_n$ in the acid:

$$Me(OH)_n + n\ H^+ \longrightarrow Me^{n+} + n\ H_2O$$

This mechanism corresponds to the results according to which the temperature increase of anodic dissolution currents of Fe-Cr alloys in H_2SO_4 near the passivation potential takes place only to a certain critical temperature. Above this temperature currents decrease. It is shown that chemical dissolution may be displayed by metals of different characteristics and not only in alkaline, but also in acid solutions of electrolytes. It follows from this study that in making a choice of methods for the protection of metals and alloys from corrosion it is also necessary to take into account the possibility of deviation of their behavior from the behavior described by the laws of electrochemistry. Specifically it is shown that in a number of cases the cathodic protection of metals is limited. In order to make more definite conclusions regarding the mechanism of chemical reaction it is necessary to obtain additional data, especially on the effect of pH and anionic composition of the dissolution process. Orig. art. has: 3 figures.

APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000413330004-3"

L 12973-65
ACCESSION NR: AP4042213

ASSOCIATION: Fizika-khimicheskiy institut im. L. Ya. Karpova (Institute of Physico-Chemistry)

SUBMITTED: 26Feb64 ENCL: 00

SUB CODE: MM NO REF SOV: 004 OTHER: 000

Card 3/3

KOLOTYRKIN, Ya.M.; FLORIANOVICH, G.M.

Chemical mechanism of the dissolution of iron, chromium, and their alloys in sulfuric acid. Zashch.met. 1 no.1:7-12 Ja-F '65. (MIRA 18:5)

1. Nauchno-issledovatel'skiy fiziko-khimicheskiy institut imeni Karpova, Moskva.

L 48971-65 EWT(m)/EPF(c)/EWA(d)/EWP(t)/EWP(b) IJP(c) JD/JG/WB

ACCESSION NR: AP5007747 S/0364/65/001/001/0012/0016

AUTHOR: Golovina, G. V.; Florianovich, G. M.; Kolotyrkin, Ya. M. 22 21 B

TITLE: Investigation of the kinetics of the initial stages of the activation of iron-chromium alloys by halide ions

SOURCE: Elektrokhimiya, v. 1, no. 1, 1965, 12-16

TOPIC TAGS: iron 27, chromium 27, alloy, halogen, passivation

ABSTRACT: The process of passivation occurs slowly in time so that the relationship between the dissolution rate for the passive metal and the potential depends on the rate of change in the potential during the process of measurement: the lower the rate of change in potential the more deeply will the metal be passivated, and the lower will be the fixed dissolution rate for the metal at each given potential which is more positive than the initial one. Such a method makes it possible to follow not only the rate of passivation of the alloy but also the rate of activation under the effect of halide ions. This method was then used to study the effect of various factors on the kinetics of the initial stages of pitting forma-

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L 48971-65

ACCESSION NR: AP5007747

tion on preliminarily passivated alloys. A special ascillographic polarograph was used with the help of which anode polarization curves were taken at rates of change in the potential of the alloy from 0.01 to 64 v/sec. The satisfactory agreement of test and calculated results provided confirmation of the independent occurrence of the processes of activation and passivation in the initial stages of the activation of passive alloys by halide ions. Orig. art. has: 7 figures, 6 equations.

ASSOCIATION: Fiziko-khimicheskiy institut imeni L. Ya. Karpova (Physical-Chemical Institute)

SUBMITTED: 15Apr64 ENCL: 00 SUB CODE: MM, GC

NO REF SOV: 004 OTHER: 003

Card 2/2

DEMBROVSKIY, M.A.; FLORIANOVICH, G.M.

Feasibility of using a scintillation γ-spectrometer for the determination of low rates of steel corrosion. Zashch. met. 1 no.1:115-118 Ja-F '65. (MIRA 18:5)

1. Nauchno-issledovatel'skiy fiziko-khimicheskiy institut imeni Karpova.

L 58369-65 EWG(j)/EWT(m)/EWP(w)/EPF(c)/EWA(d)/EPR/T/EWP(t /EWP(b) Pr-4/Ps-4
IJP(c) JD/WB
ACCESSION NR: AP5011358 UR/0365/6 /001/002/0156/0160
620.193.0

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32
B

AUTHOR: Florianovich, G. M.

TITLE: The effect of temperature on the passivation tendency of alloys

SOURCE: Zashchita metallov, v. 1, no. 2, 1965, 156-160

TOPIC TAGS: passivation, metal physical property, metal chemical property

ABSTRACT: The anodic dissolution kinetics of alloys of iron with chromium and nickel were studied in aqueous sulfuric acid solutions at various temperatures. It was shown that, for this system, there is a critical temperature at which the alloy may pass spontaneously from the active to the passive state. As the chromium and nickel content of the alloy is increased, the critical temperature decreases. Increase in pH and introduction of oxygen into the electrolyte also decrease the critical temperature for self-passivation. A theoretical explanation is proposed to explain the self-passivation of these alloys at a specific temperature. Orig. art. has: 5 figures.

Card 1/2

L 58369-65
ACCESSION NR: AP5011358

ASSOCIATION: Nauchno-issledovatel'skiy fiziko-khimicheskiy institut im. L. Ya. Karpova (Physicochemical Scientific Research Institute)

SUBMITTED: 11Nov64 ENCL: 00 SUB CODE: MM

NO REF SOV: 005 OTHER: 004

AR

Card 2/2

GOLOVINA, G.V.; FLORIANOVICH, G.M.; KOLOTYRKIN, Ya.M.

Causes of the inhibiting effect of halogen ions on the dissolution of iron and steel in sulfuric acid. Zashch. met. 2 no.1:41-45 Ja-F '66. (MIRA 19:1)

1. Nauchno-issledovatel'skiy fiziko-khimicheskiy institut imeni L.Ya. Karpova, Moskva. Submitted August 31, 1965.

L 35299-66 EWP(t)/ETI IJP(c) JD/WB/GG

ACC NR: AP6026820 SOURCE CODE: GE/0065/66/231/03-/0145/0150

AUTHOR: Kolotyrkin, Ya. M. (Professor; Doctor); Florianovitch, G. M.

ORG: L. Ya. Karpova Institute for Physical Chemistry, Moscow

TITLE: Temperature-dependence of the dissolution kinetics and of the passivation of metals and alloys. Part 2: Temperature-dependence of the dissolution mechanism

SOURCE: Zeitschrift fur physikalische Chemie, v. 231, no. 3-4, 1966, 145-150

TOPIC TAGS: reaction mechanism, chemical kinetics, cathode polarization, iron, chromium, iron alloy, chromium alloy, sulfuric acid, temperature dependence, corrosion

ABSTRACT: Cathodic and anodic polarization curves were obtained for iron, chromium, and alloys of these in sulfuric acid at various temperatures, and the curves were compared with those corresponding to the relation between potential and dissolution rate, to elucidate the temperature-dependence of the dissolution kinetics. It was shown that both electrochemical and chemical processes are involved in the dissolution mechanism, and that the mechanism can be steered to favor either way by appropriate adjustment in the reaction parameters. The principal parameters involved are potential and temperature. The significance of the findings in corrosion research was discussed. Orig. art. has: 5 figures.

[JPRS: 36,464]

SUB CODE: 07, 20 / SUBM DATE: 21Aug66 / ORIG REF: 003

Card 1/1

FLORIANOVICH, N.M.

New "Electroimpulsator" apparatus. Med.prom. 10 no.2:24-27 Ap-Je '56.
(MLRA 9:8)

(ELECTRIC GENERATORS)
(PHYSIOLOGICAL APPARATUS)

Florianovich, N.M.

MISCELLANEOUS

"An Apparatus for Electrical Stimulation of Respiration", by N.M. Florianovich, All-Union Scientific Research Institute of Medical Instruments and Equipment, Meditsinskaya Promyshlennost' SSSR, No 5, May 1957, pp 49-51.

An apparatus for electrical stimulation of respiration is described by the author. It has been devised by the All-Union Scientific Research Institute of Medical Instruments and Equipment, and is based on the principle of electrical stimulation of the various groups of muscles to produce their contraction and relaxation.

The article is accompanied by a photograph and a diagram.

1. Vesesoyuznyy nauchno-issledovatel'skiy institute meditsinskogo instrumentaria i oborudovaniya

Card 1/1

- 51 -

FLORIANOVICH, N.M.; BORISOVA, O.I.; GUNDAROV, V.P.

The SEL-2, new model of the automatic erythrocyte counting apparatus. Nov. med. tekh. no.2:20-24 '62.
(MIRA 17:11)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut meditsinskikh instrumentov i oborudovaniya.

FLORIANSKY, O.

Automatic electro-presure control. p. 625. (STROJIRENSTVI, Vol. 7, No. 3, Aug 1957, Praha, Czechoslovakia)

SO: Monthly List of East European Accessions (EEAL) LC, Vol. 6, No. 12, Dec 1957. Uncl.

FLORICA, I.

More help for women's committees. p. 4. CONSTRUCTORUL. (Ministerul Constructiilor si Industriei Materialelor de Constructii si Uniunea Sindicatelor de Salariati din Intreprinderile de Constructii) Bucuresti. Vol. 7, no. 293, Aug. 1955.

So. East European Accessions List Vol. 5, No. 9 September, 1956

FLORICA, I.

Hepavit 12. Med. int., Bucur. 9 no.11:1741-1742 Nov 57.
(ANEMIA, therapy
liver extract containing vitamin B 12.)
(LIVER EXTRACTS, thera. use
beef liver extract containing vitamin B 12, in anemia)
(VITAMIN B 12, ther. use
anemia, with beef liver extract)

FLORICAN, P.

R/003/60/011/005/018/023
A125/A026

AUTHOR: None given

TITLE: Meeting of the Chemical Industry

PERIODICAL: Revista de Chimie, 1960, Vol. 11, No. 5, pp. 299 - 302

TEXT: In the meeting on "Radioisotopes in Research and Chemical Industry", held on March 7 - 8, 1960, organized by Secţia Chimie - Comisia de Radiochimie (Chemical Section - Radiochemical Commission) led by Dr. G. Ioanid and opened by lecturer I. Drimuş, President of the Chemical Section, and by Professor, Academician S. Ţiţeica, the following papers were read: "Production of Radioactive Isotopes in Rumania" by C. Chiotan; "Production of Radioactive Iron From Complex Combinations by Szillard-Chalmers Reactions" by C. Chiotan and A. Genunche; "Gammagraphical Sources Produced at the Institute of Nuclear Physics" by L. Ciplea, P. Florican and M. Oncescu; "Principles for Planning and Organization of the Radiochemical Laboratories" by Al. Buşilă; "Protection of the Organism Against the Noxious Action of Ionizing Radiations With the Aid of Some Chemical Compounds" by Gh. Furnică; "Decontamination Within the Laboratories Operating With Radioactive Isotopes" by I. Gaspar and D. Şerban; "Application of Radioac-

Card 1/2

Meeting of the Chemical Industry

tive Isotopes in Chemical Industry" by G. Ioanid; "Achievements at the I.F.A. in the Field of the Radiation Chemistry" by D. Ştefănescu; "Ionizing Radiation, Initiator of the Oxidation Reaction of Paraffin" by G. Ioanid, Al. Drăgut, I. Drimus, A. Stoian and V. Dumitrescu; "Polymerization and 'Grafting' Operations Under the Influence of Ionizing Radiations" by B. Hlevca, F. Dragnea and M. Dinescu; "Sterilization of Medicines With Gamma Radiation" by D. Arizan, P. Adrian and A. Constantinide; "Synthesis of Medicines by Traced Atoms" by D. Arizan, P. Adrian and A. Constantinide; "Application of Radioactive Isotopes in Chemical Research" by S. Ionescu; "Achievements in Radiochemistry at the Chemical Institute of the Rumanian Academy, Cluj Affiliation and at the Department of Anorganic Chemistry of the Babeş-Bolyai University" by R. Ripan, Cr. Marcu and N. Pascu; "Tempering Processes in the Szillard-Chalmers Effect" by T. Costea; "Reactions of Isotopic Exchanges in Heterogeneous Medium" by I. Găinar; "Contributions to the Study of the Ionic Exchange on Cationic Resins. Utilization of Organic Solvents as Eluant Agents in the Cationic Exchange" by O. Constantinescu; "Works of the Researchers at the I.F.A. With Regard to the Utilization of Radioactive Isotopes in Analytic Chemistry" by T. Născuţiu; "Radiochemical Determinations in Ferrous Metallurgy" by Gh. Dumitrescu; and "Radiometric Measurings in Chemical Industry" by Gh. Ioanid.

Card 2/2

CHIOTAN, C.; CIPLEA, L.; FLORICAN, P.; ONCESCU, M.

Prime sources of Co 60 for gammagraph produced at the Institute of Atomic Physics of the Rumanian Academy. Studii. cerc fiz 11 no.3: 804-805 '60. (EEAI 10:2)

1. Institutul de fizica atomica Bucuresti.
(Rumania--Nuclear physics) (Cobalt) , (Radioisotopes)

1. VINOKUROV, V. and FLORICH, F.

2. USSR (600)

4. Sakhalin - Coal

7. For the black stone. Znan.sila no. 11, 1952.

9. Monthly Lists of Russian Accessions, Library of Congress, March 1953, Unclassified.

FLORIKXaN, A.K., Cand. Med. Sci., (diss) "Effectiveness of thoracoplasty and its effect on the respiratory and circulatroy functions," Kharkov, 1961, 16 pp (Kharkov State Medical Institute) 200 copies (KL-Supp 9-51, 193)

FLORIN, B.

Method applied in the maintenance and repair of wooden ties. p.127.

REVISTA CAILOR FERATE. (Calle Ferate Romine)
Bucuresti, Rumania
Vol. 7, no. 3, Mar. 1959.

Monthly list of Eastern European Accession Index (EEAI) LC vol. 8, No. 11
November 1959
Uncl.

FLORIN, Boris, ing.

Decking of crossroads. Rev cailor fer 12 no.9:512-519 S '64.

Florin, E.

2

Calculation of closed vaporization and condensation for an ideal multicomponent mixture. E. Florin. *Forsch. Gebiete Ingenieurw.* 21B, 165-75(1955).—A complete math. treatment is given for the detn. of vapor-liquid equil. in a hydrocarbon mixt. It is assumed that the soln. is ideal and that Raoult's law holds over the whole range of compn. These assumptions permit the calcn. of the liquid and vapor compns. during the course of a distn. Detailed discussions of the relations necessary for the prepn. of equil. diagrams relating the molar compns. of vapor and liquid at various temps. and pressures are given, along with examples of their application, including flash vaporization. J. H. W.

1

FLORIN, I.

COUNTRY	:	USSR V
CATEGORY	:	Pharmacology and Toxicology. Cholinergic Agents
ABS. JOUR.	:	RZhBiol., No. 5 1959, No. 23147
AUTHOR	:	Florin, I.
INST.	:	Chair of Forensic Medicine, 1st Leningrad*
TITLE	:	Change of the Activity of Cholinesterase of the Cerebrum and Muscles in Experimental Poisoning by Phosphacol
ORIG. PUB.	:	Sb. tr. kafedry sudebn. med. 1-y Leningr. med. in-t, 1958, vyp. 2, 191-194
ABSTRACT	:	In experiments on mice, phosphacol in a dose of 0.1 mg/kg depressed cholinesterase of the brain and muscles, respectively, up to 61.9 and 55.7%, in a dose of 1 mg/kg up to 31.5 and 34.9%, and in a dose of 10 mg/kg up to 96.6 and 99.1% of the initial activity.-- From the author's summary

*Medical Institute

Card: 1/1

FLORIN, K.P.

137-58-1-1242

Translation from: Referativnyy zhurnal, Metallurgiya, 1958, Nr 1, p 167 (USSR)

AUTHOR: Florin, K.P.

TITLE: Increase in Resistance to Scale and Coarsening of Grain in Irons by Liquid Calorizing (Povysheniye okalinostoykosti i rostoustoychivosti chugunov metodom zhidkogo alitirovaniya)

PERIODICAL: Tr. Mosk. in-ta khim. mashinostr., 1957, Vol 12, pp 85-94

ABSTRACT: Experiments in liquid calorizing (C) in a bath of pure Al in which a flux consisting of (%) NaCl 35, KCl 35, ZnCl 20 and Na_3AlF_6 10 was applied to the face have been conducted. First the first two components were charged, and the others were added as the former fused. The optimum temperature was 700°C, holding was for 20 min, and the thickness of the layer 0.10-0.15 mm. The specimens tested were: steels 10 &45, gray iron, high-strength iron (HI) (with spheroidal graphite). The characteristics studied were: the scale resistance in air and the resistance to grain coarsening at 700°, 800°, 900° for 100 hours each, and 1000° for 160 hours (by cycles at 20 hour intervals). The best results were yielded by HI: absence of oxidation and coarsening of grain by 80 to 84 percent smaller than prior

Card 1/2

Increase in Resistance to Scale (cont.)

to C. After C, HI and steel also presented high corrosion resistance in H_2S and SO_2 at 700° for 10 hours. The σ_{bi} at 18° and 900° of annealed and unannealed calorized irons was the same as prior to calorizing.

A. S.

1. Steel-Liquid calorizing 2. Iron--Liquid calorizing 3. Steel--Scale resistance--Characteristics

Card 2/2

FLORIN, V.A. [deceased] (Leningrad)

Criterion of the emergence of cases of the liquefaction of water-saturated sand. Osn., fund.i mekh.grun. 3 no.6:11-12 '61. (MIRA 15:4)

(Soil mechanics)

FLORIN, V.A. [deceased]

Some features of studies of crumbling rock foundations. Osn., fund. i mekh. grun. 4 no.6:6-7 '62. (MIRA 16:1)
(Soil mechanics) (Foundations)

88325

R/002/60/000/012/003/003
A125/A026

17.2550

AUTHOR: Florin, Z., Engineer

TITLE: 1960 - A Year of Success of the Soviet Astronautics

PERIODICAL: Ştiinţă şi Tehnică, 1960, No. 12, pp. 38 - 39

TEXT: After reviewing all artificial satellites and space ships launched by the Soviets during the last three years, the author briefly describes their scientific purpose. According to Professor Blaganravov, the third space probe launched on December 1, 1960, was equipped with a large number of scientific instruments to study the following two groups of problems: medical-biological experiments and investigations of the physical properties of a wide zone of space. The orbit of the third space probe and a perigee of 188 km and an apogee of 260 km. The initial orbiting speed was 88 min. By the third space probe, Soviet scientists have conducted many space-medical and space-biological experiments, e.g. on the influence of space factors such as weightlessness, radiation, thermal effects, etc.; on the organism and later heredity. At the same time, the operation of all types of devices and systems necessary for life during the flight has been checked. The behaviour of the animals in the third space probe has been watched through TV.

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88325

R/002/60/000/012/003/003
A125/A026

1960 - A Year of Success of the Soviet Astronautics

According to Professor, Doctor, I.N. Maiskiy, the data obtained on December 1 - 2, will permit the drawing of some conclusion on the problem of metabolism during space flight and its influence on heredity, and the development and partition of cells in the state of weightlessness. Thus, many data have been obtained regarding space flight of man in the near future. On the basis of this last experiment, the USSR will possibly soon launch a huge ship with animals on board, to study the reentry problem. During the same time, scientists will finish the analysis of the medical-biological data obtained by the past space probes. Other probes will possibly be launched to the moon, to Venus and Mars. There are 2 figures.

Card 2/2

15(2)
18(2)

RUM/2-59-12-10/37

AUTHOR: Florin, Z., Engineer

TITLE: Materials for Space Ships

PERIODICAL: Ştiinţă şi Tehnică, Seria a II-a, 1959, Nr 12, pp 14 - 15 (RUM)

ABSTRACT: The author describes a hypothetical flight into space and the materials used in the construction of a space vehicle of the future. The very high friction temperatures produced at the surface of a space vehicle are cooled by a special liquid pumped into the covering which is of honeycomb structure. The fuselage covering is made of stainless steel containing 15% chromium, 7% nickel and 2.5% molybdenum which has a resistance of 9 t/sq cm at a temperature of 540°, allowing a flight speed of M=4, without cooling. The wing covering is made of an alloy containing 99.5% molybdenum and 0.05% titanium which has a resistance of 6.18 t/sq

Card 1/5

cm at a temperature of 870°. The pointed nose of the rocket plane is made of an aluminum-chromium-silicon alloy, which proved to be resistant to a temperature of 1,420° C. Plastics have been successfully used in the construction of rocket engines, jet engines, pipes and insulations. The rotor of the reserve engine's turbine made of "Asbestophenol" resisted for 5 min a temperature of 1,100° C and 40,000 rpm. The blades of this turbine made of pressed phenolic resins withstood a temperature of 2,550° C for 2 min. The scientific apparatus containers and the fuel tanks are made of organic glass by centrifugal casting. Having a surface of 3-4 sq m, a thickness of approx 12 mm and a specific gravity of 1.77, the containers resisted a pressure of up to 1.2 t/sq cm. The rudders and the aerodynamic brakes of the rocket plane are covered with a 50-mm-thick "nitric-boron polymer" layer resistant to more than 800° C. Highly resistant ceramic materials have been obtained by increasing the

alumina content of clay to more than 84%. By increasing the alumina content to 90%, super-resistant corundum ceramics are obtained which melt at a temperature of more than 2,000° and are resistant to acids, including hydrofluoric acid. Various metal-ceramic materials have been developed such as special steel combined with molybdenum and covered with graphite sheets glued with phenolic resins. This material used for the construction of exhaust nozzles in rocket engines resisted a temperature of 2,000° C. The resistance of honeycomb structures and monoblock panels has been separately studied. In case of honeycomb structures the covering is fixed by special resins to a metal network made of alloyed steel sheets. Cr-Ni-Mo steel is used for the construction of the honeycomb structure and Mo-Ti steel for the wing covering. The rudders of the rocket plane are made of monoblock panels, cast of the "X 2,020" alloy (lithium and aluminum), resisting a temperature of 450° C. The author describes the construction of the "Mirnaya" space